

~~TOP SECRET~~
 DEPARTMENT OF DEFENSE
 ARMED FORCES SECURITY AGENCY
 WASHINGTON 25, D.C.

AFSA-00/dk
 Serial 000161

11 July 1950

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MEMORANDUM FOR: Rear Admiral L.C. Stevens, U.S. Navy
 Chairman, Joint Subsidiary Plans Division
 (Joint Chiefs of Staff).

SUBJECT: Comment on Voice of America (re NSC 66).

1. There are certain fundamentally important matters pertaining to the Voice of America to which I assume the State Department will be able to give all the attention they require -- without outside help. The first of these is that all the programs to be broadcast be as generally appealing as possible to the desired Russian and Russian Satellite audiences -- while portraying only the truth about the U.S., our policies, activities, objectives and democratic way of life. Another is that the psychological reaction of the target audience be regularly obtained. The State Department should obviously assume full responsibility for the actual VOA broadcasting and for providing necessary broadcasting facilities, and adequate broadcasting program material of types most likely to receive favorable psychological reaction.

2. Certain other aspects of the problem are of such a nature that there is reason to believe that the Department of Defense could more effectively assume responsibility for them, in support of the Department of State. In this memorandum I shall briefly discuss these aspects. Even a casual consideration of the State Department's expressed needs for the VOA ^{program} ~~problem~~ indicates that their provision involves the use of certain types of facilities and skilled personnel which are also required in fields of activity carried on by the Armed Forces. If, in order for the VOA program to be a success, it must be supported by radio direction finder activities, radio intercept activities, signal analysis, and world-wide communication facilities and circuits, then these additional facilities obviously parallel the similar facilities now operated by the Department of Defense.

NSA review completed

State Department review completed

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3. The Director, AFSA, as a result of the recent conference with technical representatives of the State Department, and based upon their expressed objectives concerning VOA, has endeavored to outline what the solution of this problem would involve in special facilities and personnel. The enclosure sets forth this information. This enclosure should not be considered as a firm plan based upon detailed study, since no such study has yet been undertaken by AFSA. However, some idea of the effort in the radio direction finding and communications intelligence fields required to support the VOA program, as contemplated by the Department of State technical representatives, is set forth in the enclosure. This estimate is based on the experience of the Armed Forces in similar problems. It is tentatively estimated that the effort would require between 250 and 300 additional trained personnel for such special communications activities. Because such personnel would be engaged in operations closely allied to those of the Armed Forces Security Agency (AFSA), it is believed that they could be more effectively utilized if made operationally a part of that organization. Such an arrangement would, moreover, provide for considerable flexibility, whereby the effort in the support of the VOA program could, at times, be assisted by AFSA personnel and facilities normally employed for other missions, and vice versa. AFSA could not undertake this additional work for the State Department without additional facilities and personnel.

4. It is believed that serious consideration should be given by the Armed Forces Security Agency Council (AFSAC) to placing any communication intelligence activities in support of VOA under the control of AFSA, and that consideration should be given by the Joint Communications Electronics Committee (JCEC) to the possibility of utilizing expanded general communication facilities of the Armed Forces in support of VOA. Accordingly, before deciding upon any course of action, it is recommended that these matters be referred to JCEC and AFSAC for their study and recommendations.

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5. The Communications Intelligence aspects of this matter also concern the State Department and the Central Intelligence Agency (CIA), and hence this matter comes under the jurisdiction of the U. S. Communications Intelligence Board (USCIB). This latter board has authority under the National Security Council (NSC) for authoritative coordination of all communications intelligence activities of the Federal Government, including priorities, and normally makes required recommendations to NSC on matters of broad policy.


Earl E. Stone

EARL E. STONE
Rear Admiral, U.S. Navy
Director, Armed Forces Security Agency

Enclosure - 1
(Comment on Technical Aspects)

Copy furnished:

Chairman, Research and
Development Board
Director, Communications-
Electronics
Director, Central Intelligence
Members, AFSAC



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ENCLOSURE

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SUBJECT: Voice of America (re NSC 66) - Comment on Technical Aspects.

1. The State Department has some personnel and some equipment for this work at Tangiers, Munich and Salonica, but obviously cannot hope to solve this problem on that basis. In fact, there can be no absolute guarantee of complete success in expeditious jammer location and identification even with the very sizable outlay of men and equipment described below. However, with such a set-up, there can be considerable hope of at least limited success in solving this problem. Such an organization would continuously provide the ~~net~~^{broadcast} control stations with current information as to the frequencies that should be effective at definite times for VOA broadcasts from the several locations where VOA broadcasting stations are located.

2. The following conditions are assumed in connection with the problem of obtaining bearings and other information on the jammers operating against the Voice of America program:

- (a) Besides the transmitter carrying the Voice at least one other transmitter (jamming) would be in operation on that same frequency.
- (b) A fix accuracy within a circle of diameter of approximately 100 to 200 miles would be acceptable on jammers operated by USSR.
- (c) A minimum of 7 D/F sites would form a net on the periphery about European Russia and additional stations would form a net to cover Asiatic Russia.
- (d) Skilled operators and trained analysts would be available.

3. Technically, solution of the problem of separating and taking bearings on several Russian radio interference signals transmitted simultaneously on the same frequency from different localities will be extremely difficult. If, some or all of the jamming transmitters are employing suppressed carrier techniques, there can at present be no assurance of obtaining a fix. In any case, the solution can only be achieved by highly skilled operating specialists.

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4. The following are tentative requirements for personnel and equipment required at each of the several radio intercept and D/F stations:

(a) PERSONNEL (3 or 4 watches necessary daily - for 24-hour 7-day service)

- 1 Radio D/F operator per watch
- 1 Radio Technician and maintenance man per watch
- 3 Radio Monitoring operators and signal analysts per watch
- 2 Operators (1 for circuit operating and 1 for decoding per watch)

(b) MATERIEL

Highly directive antennae oriented in direction of most likely Russian target areas. Well installed rhombics would be satisfactory. Antennae of lesser gain but of higher directivity would perhaps be more satisfactory.

- 5 H/F Receivers for monitoring (Collins 51J or Hammarlund 600JX)
- 2 M/F Receivers (superhetrodyne type - Navy Model RAA, RAS or RAH)
- 2 Model M-2 Signal Splitter (McLaughlin type or General Electric Single Sideband Selector Model YMS-1)
- 2 Magnetic Tape Recorders (Magne recorder type)
- 3-5 Panoramic adaptors for HF Receivers
- 1-2 Sonograph (Kay Electric type)
 - 1 Sonolator (Kay Electric type)
 - 1 Panoramic Sonic Analyzer (Panoramic Corporation type)
- 1 H/F D/F Equipment of aural type
- 1 M/F D/F Equipment of aural type
- 1-2 H/F Receivers for circuit (net) communications
- 1-2 H/F Transmitters for circuit (net) communications (500-1000 watts).

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5. Radio intercept, D/F and signal analysis stations might be established in the following locations, if practicable:

Norway (or Sweden), Great Britain, Germany, Greece, Saudi-Arabia, Morocco, Libya, India, Ceylon, Okinawa, Japan and Alaska.

Each D/F station should be at least 50-100 miles distant from the nearest VOA broadcast transmitter for satisfactory operations. The stations probably should be operated as two nets (European and Asiatic). The control stations for these nets should preferably be located within effective communication range of the European and Asiatic control centers for the VOA broadcast service. In addition, D/F charts, plotting facilities and technical personnel including ionospheric wave propagation experts, should be provided at the European and Asiatic control centers. A means of rapid radio communication should be provided between the two net control centers. General over-all control of VOA presumably will be exercised in New York and Washington.

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